CLAIMS

1. A method for selecting a route in a data network to a destination address space, comprising:

receiving traffic information traversing the data network;

identifying sources that request access to the destination address space from the traffic information;

determining the destination address space is accessible through a plurality of network service providers;

measuring inbound traffic performance from each of the identified sources to the destination address space through each of the plurality of network service providers;

determining an optimal path associated with each of the sources to access the destination address space via one of the network service providers; and

directing each of the identified sources to access the destination address space via one of the network service providers in accordance with the optimal path associated with the source.

2. The method of claim 1, wherein the data network is the Internet.

3. The method of claim 1, wherein one of the plurality of network service providers is an Internet service provider.

4. The method of claim 1, wherein the identified sources are local domain name system (L-DNS) servers.

5. The method of claim 1, wherein the step of measuring inbound traffic performance comprises measuring inbound traffic performance based on a cost for

each of the identified sources to access the destination address space through each of the plurality of network service providers.

6. The method of claim 1, wherein the step of measuring inbound traffic performance comprises measuring inbound traffic performance based on a time it takes for each of the identified sources to access the destination address space through each of the plurality of network service providers.

7. The method of claim 1, wherein the step of identifying sources that request access to the destination address space from the traffic information comprises:

collecting the received traffic information in a data structure;

filtering the data structure to identify the sources that request access to the destination address space from the traffic information.

8. The method of claim 7, wherein the received traffic information is collected in a data structure by a Brent's hash software module.

9. The method of claim 7, wherein the data structure is filtered by a passive flow analyzer.

10. The method of claim 1, wherein the step of measuring inbound traffic performance comprises:

sending active measurement probes through each of the plurality of network service providers to each of the identified sources;

for each of the identified sources, measuring a returning path of an active measurement probes.

11. A computer-readable medium on which is encoded program code, the program code comprising:

program code for receiving traffic information traversing the data network;

program code for identifying sources that request access to the destination address space from the traffic information;

program code for determining the destination address space is accessible through a plurality of network service providers;

program code for measuring inbound traffic performance from each of the identified sources to the destination address space through each of the plurality of network service providers;

program code for determining an optimal path associated with each of the sources to access the destination address space via one of the network service providers; and

program code for directing each of the identified sources to access the destination address space via one of the network service providers in accordance with the optimal path associated with the source.

12. The computer-readable medium of claim 11, wherein the data network is the Internet.

13. The computer-readable medium of claim 11, wherein one of the plurality of network service providers is an Internet service provider.

14. The computer-readable medium of claim 11, wherein the identified sources are local domain name system (L-DNS) servers.

15. The computer-readable medium of claim 11, wherein the program code for measuring inbound traffic performance comprises program code for measuring inbound traffic performance based on a cost for each of the identified sources to access the destination address space through each of the plurality of network service providers.

16. The computer-readable medium of claim 11, wherein the program code for measuring inbound traffic performance comprises program code for measuring inbound traffic performance based on a time it takes for each of the identified sources to access the destination address space through each of the plurality of network service providers.

17. The computer-readable medium of claim 11, wherein the program code for identifying sources that request access to the destination address space from the traffic information comprises:

program code for collecting the received traffic information in a data structure;

program code for filtering the data structure to identify the sources that request access to the destination address space from the traffic information.

18. The computer-readable medium of claim 17, wherein the received traffic information is collected in a data structure by a Brent's hash software module.

19. The computer-readable medium of claim 17, wherein the data structure is filtered by a passive flow analyzer.

20. The computer-readable medium of claim 11, wherein the program code for measuring inbound traffic performance comprises:

program code for sending active measurement probes through each of the plurality of network service providers to each of the identified sources;

program code measuring a returning path of an active measurement probes for each of the identified sources.